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Policy Option Evaluation

Milwaukee County Retirement Sustainability Taskforce

June 26, 2018

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Public Sector Retirement Systems Project

The Pew Charitable Trusts

- More than 40 active, evidence-based research projects
- Projects include public safety, immigration, elections, transportation, pensions, and state tax incentives
- All follow a common approach: data-driven, inclusive, and transparent

Pew's Public Sector Retirement Systems Project

- Research since 2007 includes 50-state trends on public pensions and retiree benefits relating to funding, investments, governance, and employee preferences
- Technical assistance for states and cities since 2011

Presentation Overview

- Review of Challenges Facing Milwaukee County ERS
- Review of New Plan Options
- Evaluation: New Plan Options
- Evaluation: Approaches to Addressing the Existing Funding Gap
- Considerations for Taskforce Deliberations
- Conclusion

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Review of Challenges Facing Milwaukee County ERS

Challenges Facing Milwaukee County

- Milwaukee County went from having a fully funded pension plan in 2000 to having a nearly $600 million unfunded liability.

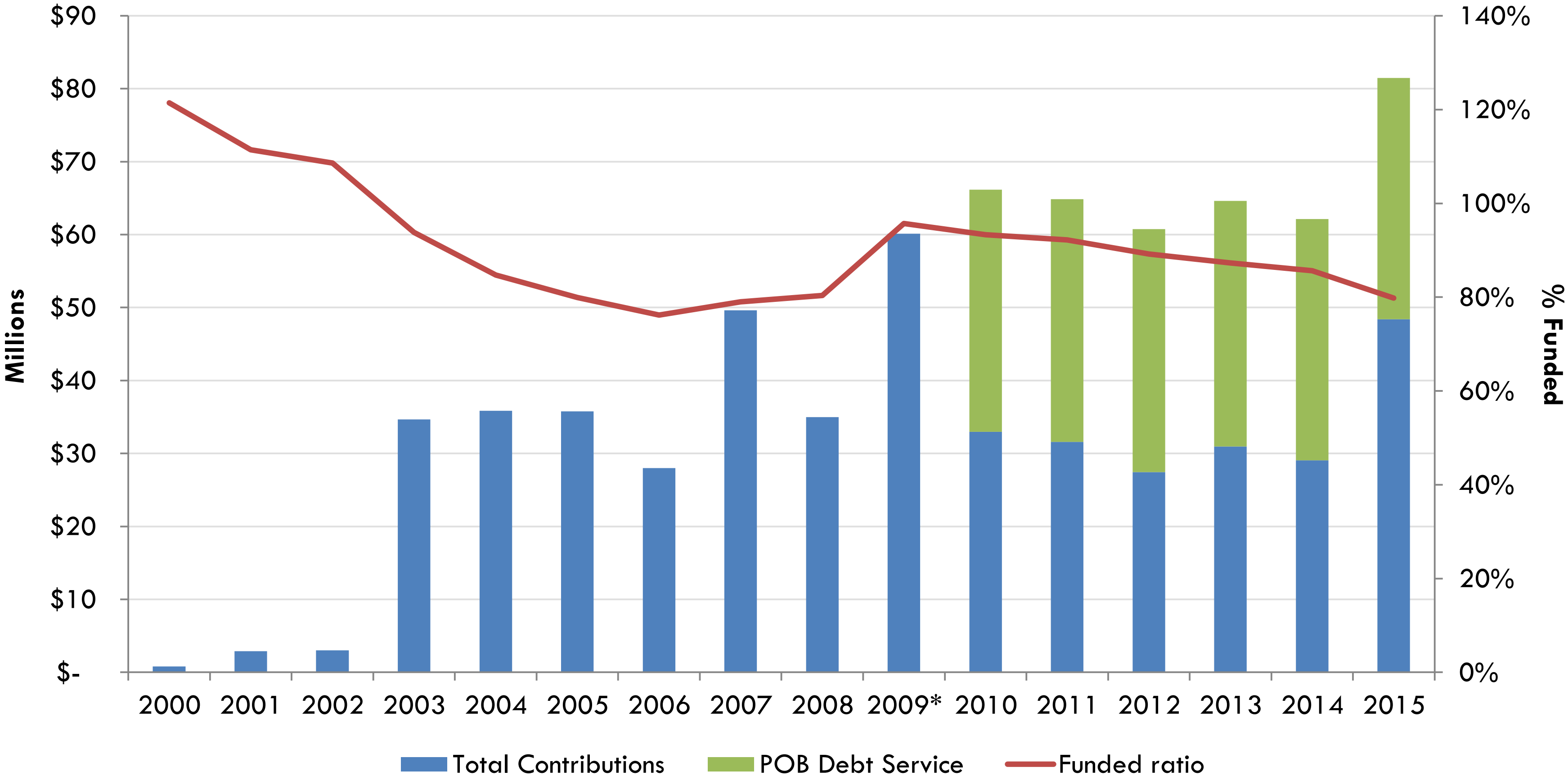
- Contributions, as well as debt service to pay for a pension obligation bond, will take up a growing share of County resources. Costs can increase further if investments fail to perform.

- The Milwaukee County Retirement Sustainability Taskforce was charged with finding a long-term, comprehensive solution to these challenges.

- "The objective of the Taskforce is to study larger pension system modifications that ensure retirement security for future retirees and long-term fiscal sustainability for the County. The Taskforce will develop recommendations to Milwaukee County on pension system modifications that should be considered."

ERS Contributions and Funded Ratio Over Time

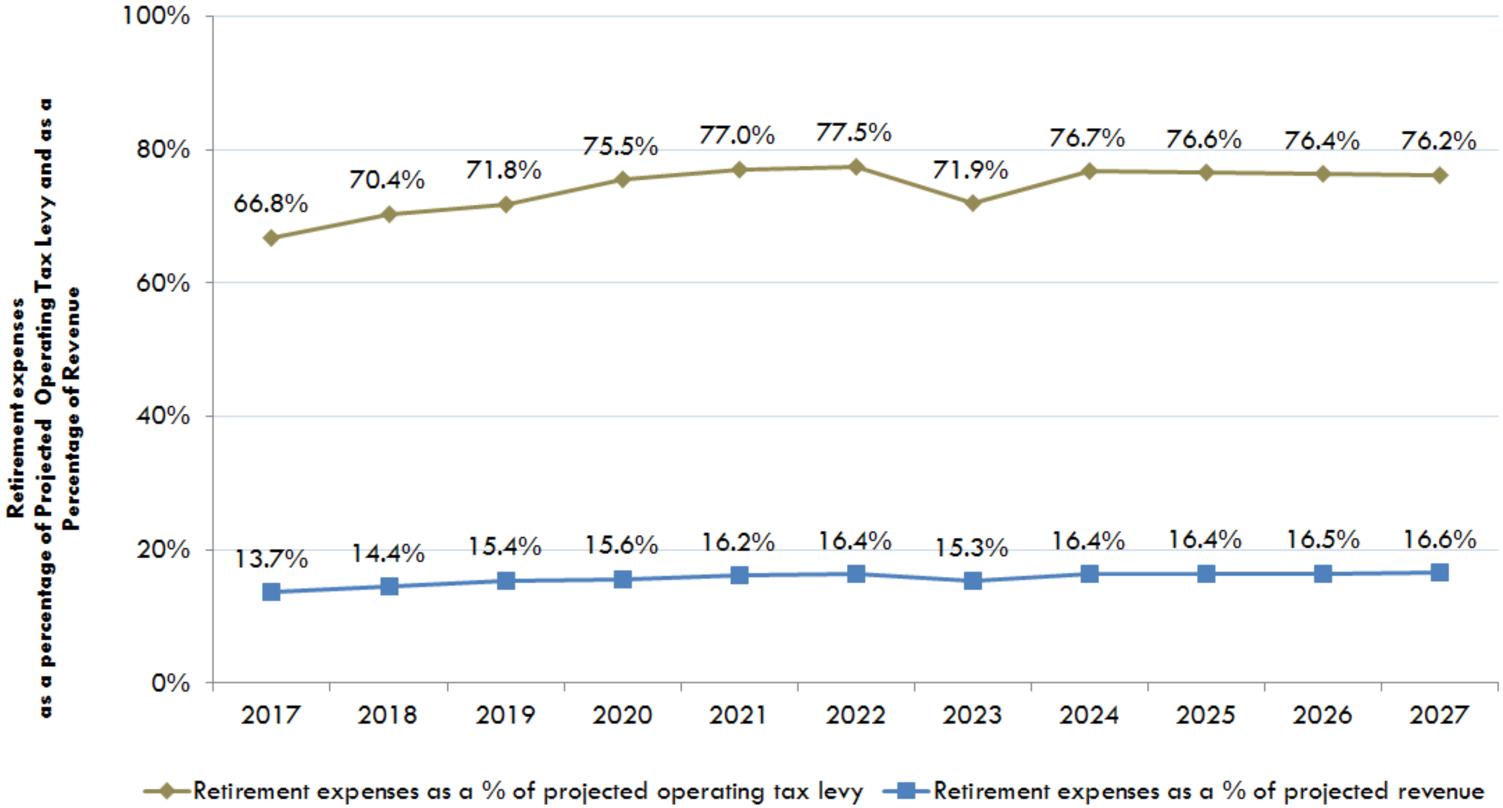
Funded status declined while required contributions increased and fluctuated dramatically.



Note: 2009 contribution excludes $397.8 M pension obligation bond proceeds
Source: ERS Annual Reports and Actuarial Valuations

Forecast of Milwaukee County Retirement Expense

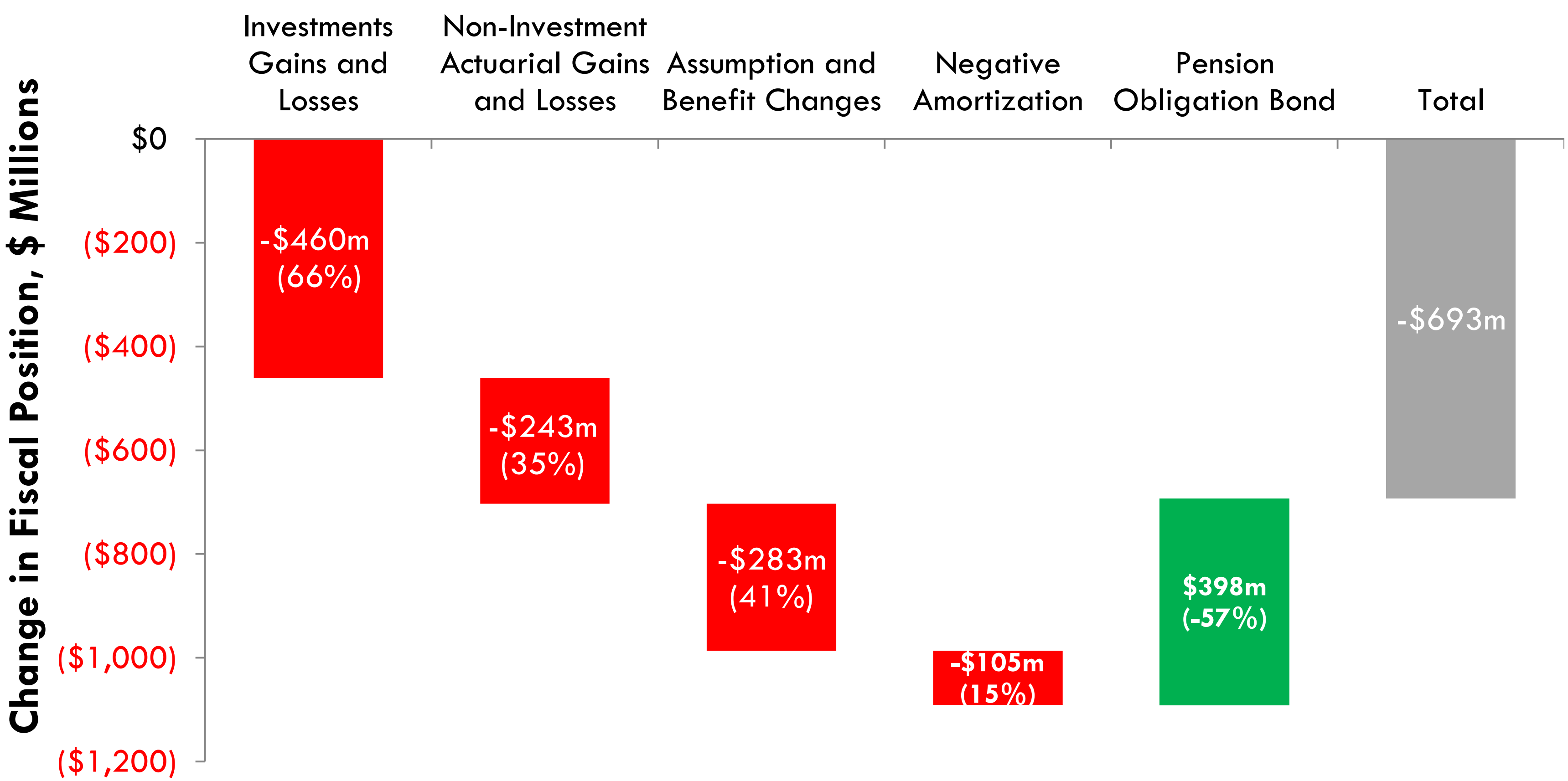
Percentage of Projected Tax Levy and Total County Revenue



Note: *"Retirement expenses" include county contributions to ERS, the annual POB payment, and retiree healthcare costs.*
Source*: ERS projections by Pew and the Terry Group using a financial simulation model created using data from ERS Annual Reports, Actuarial Valuations and other documents provided by county and plan officials. Retiree healthcare, POB costs and projected revenues provided by County.*

Milwaukee County ERS Sources of Growth in Unfunded Liability (MVA), 2001-2016

ERS went from a $100 million surplus on a market value basis to a $585 million unfunded liability.



Notes:
Pew analysis using ERS actuarial valuations.

What Caused Milwaukee County's Unfunded Liability?

- Investments that fell short of assumptions were the single largest driver of the unfunded liability—adding approximately $460 million to the county's pension debt.
  - The investment target has declined from 9% in 2001 to 8% in 2016 but remains high both compared to other state and local retirement systems and projections of likely performance.

- Contribution policy should help pay down unfunded liabilities. In Milwaukee County, contribution policy instead allowed an additional $100 million in pension debt to accumulate.

- Non-investment actuarial assumptions that missed the target along with changes to assumptions added $526 million in unfunded liabilities.

- Milwaukee County's pension obligation bond in 2009 reduced the funding shortfall by about $400 million but added additional debt to the County's balance sheet.

Findings from Reviewing ERS UAAL

- Every state and local government had to weather the Dot Com crash and the Great Recession yet public pension plan funding levels vary tremendously.

- The difference is driven by policy choices.

- While funding the actuarial recommended amounts, Milwaukee County's contributions were not sufficient to both pay for expected growth in the pension debt and the cost of new benefits—called negative amortization.

- Using overly optimistic assumptions to set policy has led to nearly half a billion dollars in additional pension debt. If similar non-investment losses and revisions to assumptions occur over the next 15 years, that could increase pension costs by another 25%.

Review of New Plan Options

Review of Key Data Points from New Plan Analysis

- Reviewing the results of three options: WRS, DC 1B, and Risk Managed Hybrid

- Below slides include:
  - Key plan provisions
  - Estimates of new plan cost and risk
  - Retirement security results

- Goal is to provide all Milwaukee County employees with a path to retirement security while ensuring that costs to taxpayers are affordable and sustainable.

- Final decision should encompass the total package of proposed changes.

Closing a Defined Benefit Plan

Method selected can significantly impact worker benefits

Types of Defined Benefit Plan Freezes	Description
Soft freeze	A pension plan is closed to new hires, while active participants in the plan continue to accrue benefits under the plan.

Plan Provisions: General Workers

	Milwaukee Co. Employees Retirement System (ERS) (Employees hired on or after August 1, 2011)	Wisconsin Retirement System (WRS)
Multiplier	1.6%	1.6%
COLA	2% simple COLA	Annuity adjustments are based on investment performance and other factors*
Employee Contribution (DB)	6.5%†	6.8%†
Vesting	5 years	5 years
Money purchase benefit	None	Yes, with 100% employer match‡
Normal Retirement	Age 64; 55 with 30 years of service	Age 65 & any years of service, or 57 & 30 years of service
Final Average Salary (FAS)	3 year average	3 year average
Social Security?	Yes	Yes
Risk-Sharing	Employees are required to contribute half of the gross normal cost and half of the amortization payment for the active employee share of the unfunded liability.	Employees contribute 50% of the total contribution rate. The annuity adjustment is based primarily on the investment returns of the plan's trust funds. Actuarial factors, such as mortality rates, also affect annuity adjustments.

Notes

† Rates for 2016; future rates based on actuarial analysis. Participants in ERS and WRS pay half of the normal cost and half of the active UAAL amortization.

‡ WRS calculates the retirement annuity using two methods: the formula method, which factors in years of service, age, salary and a benefit multiplier; and a separate money purchase method, which is calculated by multiplying a member's total employee contributions, an equal amount of employer contributions, and accrued interest by an actuarial factor based age and benefit effective date. Retirees receive whichever produces the higher amount.

Plan Provisions: Public Safety Workers

	ERS (Deputy sheriffs hired after January 1, 1994)	WRS (Protective Occupation Employees)
Multiplier	1.5 - 2.5%*	2.0 - 2.5%*
COLA	2.0%	Annuity adjustments are based on investment performance and other factors**
Employee Contribution (DB)	6.5 to 7.4%†	6.8%†
Vesting	10 years, or age 57	If you first began WRS employment on or after July 1, 2011, 5 years. Prior, vested at date of employment.
Money purchase benefit	None	Yes, with 100% employer match‡
Normal Retirement	Age 57 or age 55 with 15 years of service;	Age 54 with <25 years of service; Age 53 with 25+ years of service
Final Average Salary (FAS)	5 year average	3 year average
Participates in Social Security?	Yes	Yes***
Risk-Sharing	Employees are required to contribute half of the gross normal cost and half of the amortization payment for the active employee share of the unfunded liability.	Employees contribute 50% of the total contribution rate. The annuity adjustment is based primarily on the investment returns of the plan's trust funds. Actuarial factors, such as mortality rates, also affect annuity adjustments.

Notes

*For ERS, depends on bargaining agreement and date of hire, max benefit of 80% salary. For WRS varies based on hire date/participation in Social Security.

† Rates for 2016; future rates based on actuarial analysis. Participants in ERS and WRS pay half of the normal cost and half of the active UAAL amortization

‡ WRS calculates the retirement annuity using two methods: the formula method, which factors in years of service, age, salary, and a benefit multiplier; and a separate money purchase method, which is calculated by multiplying a member's total employee contributions, an equal amount of employer contributions, and accrued interest by an actuarial factor based age and benefit effective date. Retirees receive whichever produces the higher amount.

***Some firefighters under protective occupation hired/rehired after March 31, 1986 do not participate in social security.

DC Plans to Model

Employer Contributions match 2019 employer normal cost, Employee Contributions are Fixed at 2019 Rate

Option	Employer Contribution Rate	Employee Contribution Rate (General/Public Safety)	Description
1B	4.5%	7.2%/8.5%	Employer contribution calculated to match 2019 employer normal cost rate if there was no unfunded liability

Hybrid Design to Model

	Current Plan: MilCo ERS After 8/1/2011	Risk Managed Hybrid Design
DB		
Multiplier	1.60%	0.8%
COLA	2% simple COLA	2% simple COLA
Employee Contribution to DB	Actuarially determined	Actuarially determined
Vesting Schedule	5 years	5 years
Normal Retirement	64	64
Early Retirement	55 w/ 15 YOS	55 w/ 15 YOS
Early Retirement discount factor	5% each year	5% each year
DC		
Employee Contribution to DC	n/a	3.6%
Employer Contribution to DC	n/a	2.25%
Vesting Schedule	n/a	5 year
Risk Management Tools		
	• Employee contribution cost sharing on active share of UAAL.	• Employee contribution cost sharing on active share of UAAL. • Can include WRS-style COLA provisions.

Summary Results

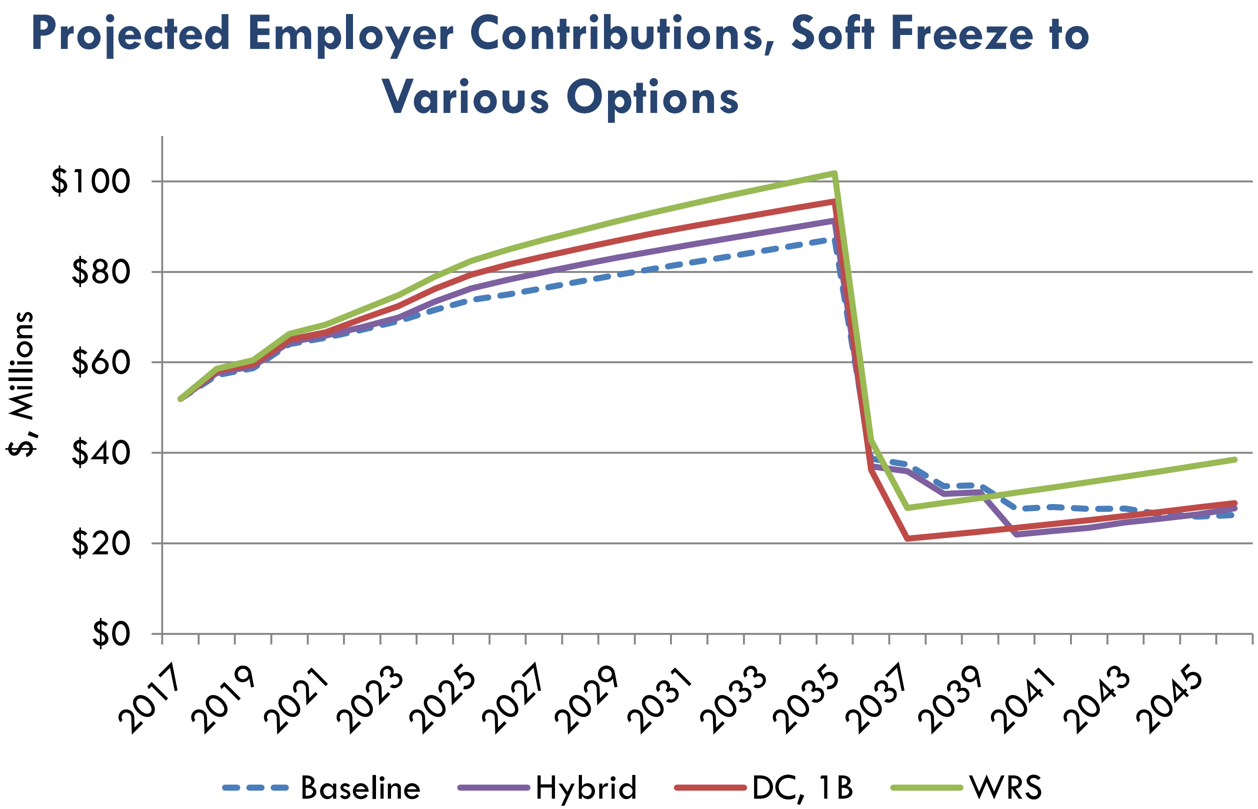
		ERS	WRS	DC, 1B	Risk-Managed Hybrid
Employer Cost, Expected Returns	Total	$1,723	$1,924	$1,773	$1,745
	Difference from ERS	*$0*	*$201*	*$49*	$22
Employee Cost, Expected Returns	New Hire Rate Range	4.6%-9.6%	6.4%-6.8%	7.2%	5.8%-10.2%
	ERS Employee Rate Range		6.1%-30.2%	6.1%-30.2%	
Replacement Income	Mid- Career Worker (Expected/Low)	9%/9%	18%/18%	20%/18%	17%/12%
	Career Worker (Expected/Low)	106%/106%	107%/95%	93%/79%	100%/87%
Risk	Employer Cost: Expected/Low/Realized	5.1%/8.7%/28%	7%/8.2%/7.2%	5.1%/5.1%/5.1%	5.1%/5.5%/TBD
	Administration	County	State	County	County

Notes
The DC figure assumes an extra half percent in DC employer contributions to replace death and disability benefits.
Parts might not total due to rounding.
A soft freeze assumes all new employees enter the new retirement system while current employees remain in ERS.
The risk-managed hybrid assumes a split DC/DB retirement system, with risk sharing features in the DB portion similar to those found in the Wisconsin Retirement System.

Evaluation: New Plan Options

Criteria 1: Impact on affordability of employer contribution (County and taxpayers)

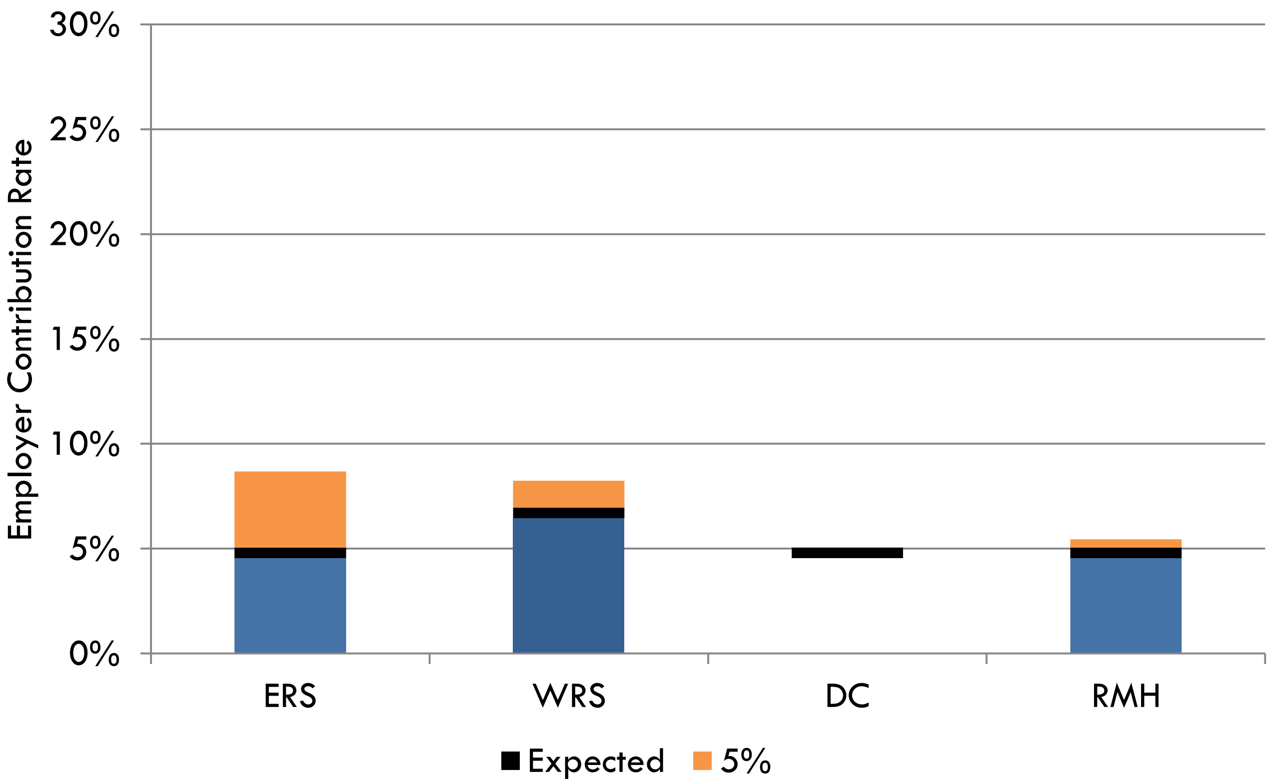
Plan	Score (1-5)
ERS	3
WRS	3
DC, 1B	3.5
Risk-Managed Hybrid	3.5



Notes
The DC figure assumes an extra half percent in DC employer contributions to replace death and disability benefits.
Parts might not total due to rounding.

Criteria 1: Impact on affordability of employer contribution (County and taxpayers)

Normal Cost Sensitivity, ERS and Other Options



Plan	Score (1-5)
ERS	3
WRS	3
DC, 1B	3.5
Risk-Managed Hybrid	3.5

Notes
The DC figure assumes an extra half percent in DC employer contributions to replace death and disability benefits.
Parts might not total due to rounding.

Criteria 2: Impact on employee contribution

Maximum Employee Contribution Rates, 2017-2046

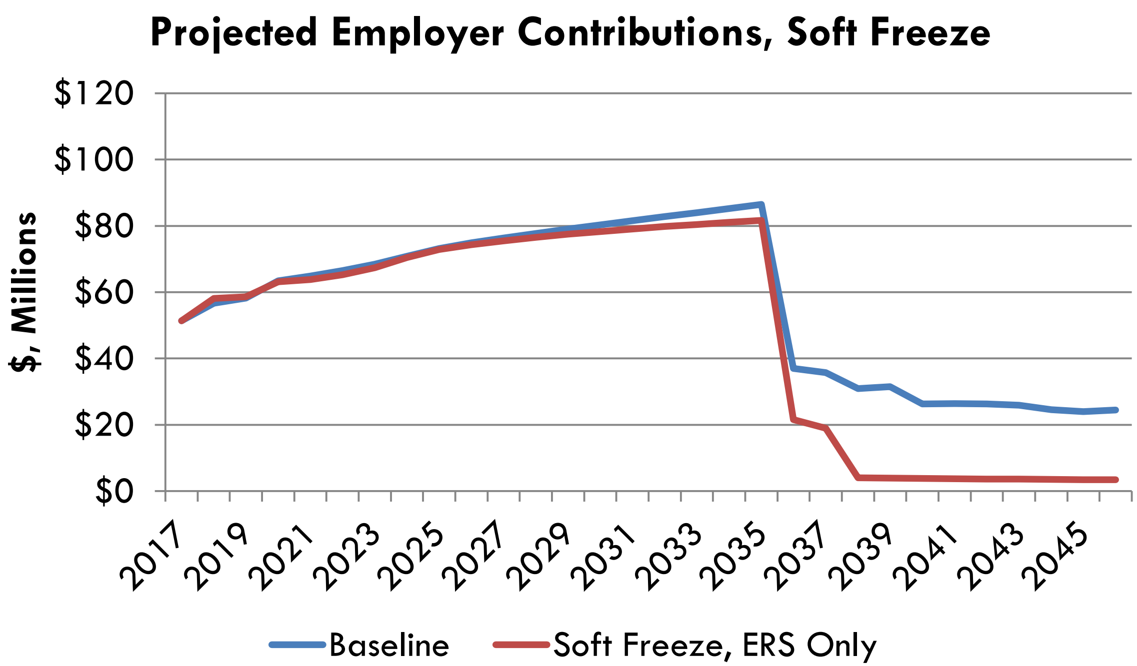
<table>
<tr><th></th><th></th><th>ERS</th><th>WRS</th><th>DC, 1B</th><th>Risk-Managed Hybrid</th></tr>
<tr><td rowspan="3">Employee Costs</td><td>New Hire Rate (Expected/Low)</td><td rowspan="2">9.6%/12.3%</td><td>6.8%/9.2%</td><td>7.2%/7.2%</td><td rowspan="2">10.2%/12.4%</td></tr>
<tr><td>ERS Employee Rate (Expected/Low)</td><td>30.2%/>50%</td><td>30.2%/>50%</td></tr>
<tr><td>ERS Employee Rate (Expected/Low), if no Pension Debt</td><td>7.1%/8.9%</td><td>8.5%/>50%</td><td>8.5%/>50%</td><td>7.6%/9.3%</td></tr>
</table>

Plan	Score (1-5)
ERS	3
WRS	2.75
DC, 1B	2.75
Risk-Managed Hybrid	3.25

Notes
The DC figure assume an extra half percent in DC employer contributions to replace death and disability benefits.

Criteria 3: Impact on unfunded liability

Already Promised Benefits will Make Up the Bulk of Milwaukee County Pension Costs through 2037



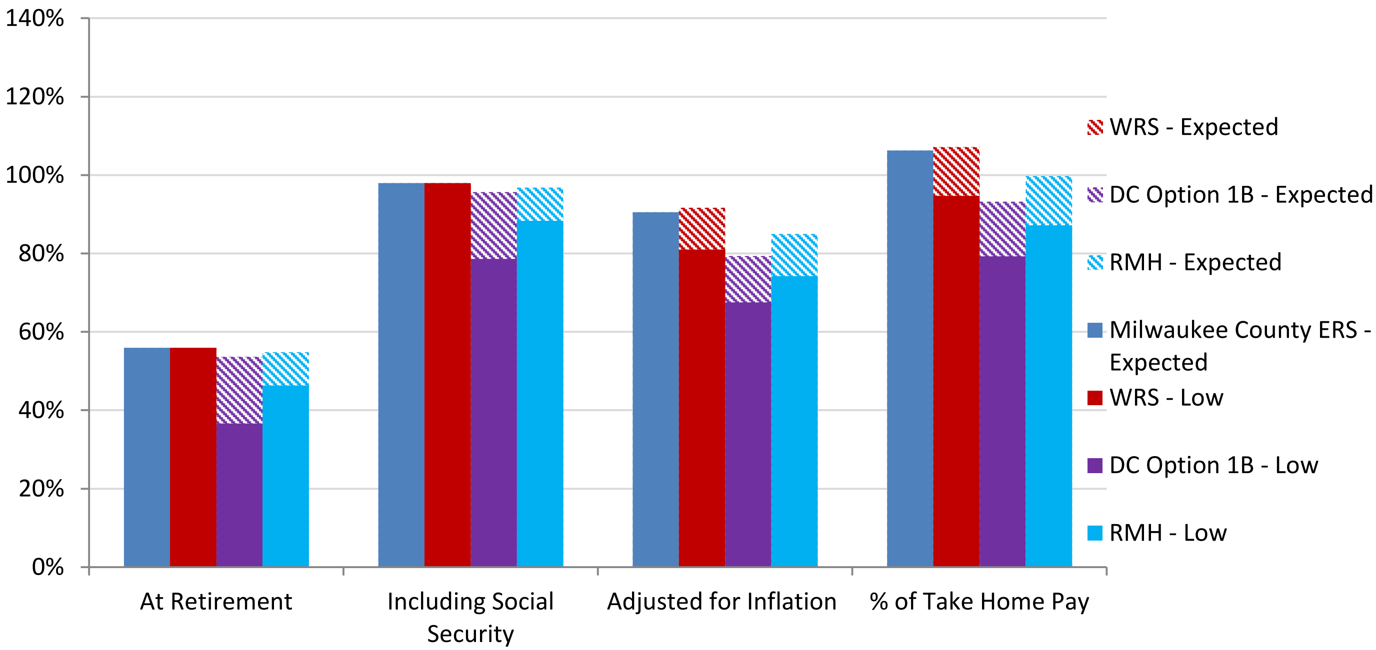
Plan	Score (1-5)
ERS	3
WRS	3
DC, 1B	3
Risk-Managed Hybrid	3

Notes:
Actuarial projections done by The Terry Group based on Milwaukee County ERS plan assumptions. Updated using additional data from Segal.

Criteria 4: Impact on retention of existing employees

Plan	Score (1-5)
ERS	3
WRS	4
DC, 1B	2.5
Risk-Managed Hybrid	3.5

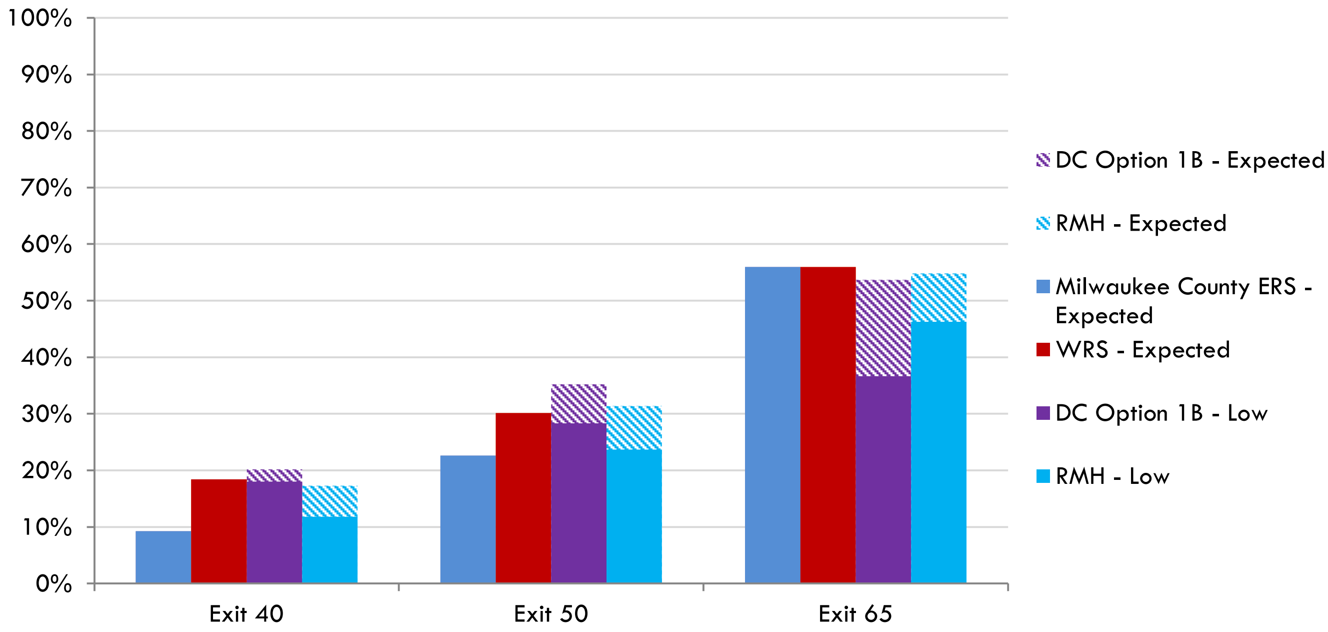
Replacement Income—Career Worker



Notes:
Pew analysis using ERS actuarial assumptions for salary growth and inflation. Expected return for DC plans is 7%; low return scenario is 5%. Annuitization is calculated using plan mortality assumptions and a 4% return assumption. Risk Managed Hybrid does not include a COLA in the low return scenario. DC plan does not include a COLA.

Criteria 5: Impact on recruitment of new employees

Replacement Income—Mid-Career Worker



Plan	Score (1-5)
ERS	3
WRS	4
DC, 1B	2.5
Risk-Managed Hybrid	3.5

Notes:
Pew analysis using ERS actuarial assumptions for salary growth and inflation. Expected return for DC plans is 7%; low return scenario is 5%. Annuitization is calculated using plan mortality assumptions and a 4% return assumption. Risk Managed Hybrid does not include a COLA in the low return scenario. DC plan does not include a COLA.

Criteria 6: Vulnerability to risk and volatility (for employers and employees)

		ERS	WRS	DC, 1B	Risk-Managed Hybrid
Employer Contribution Rate	Expected/Low	5.1%/8.7%	7%/8.2%	5.1%/5.1%	5.1%/5.5%
	Realized	28%	7.2%	5.1%	TBD
New Hire Contribution Rates Range	Expected Returns	4.6%-9.6%	6.4%-6.8%	7.2%	5.8%-10.2%
	Low Returns	6.4%-12.3%	6.7%-9.2%	7.2%	6.4%-12.4%
Replacement Income (Career Worker)	Expected Returns	106%	107%	93%	100%
	Low Returns	106%	95%	79%	87%
	Difference	*0%*	*12%*	*14%*	*13%*
Operational Risk		County	State	County	County

Plan	Score (1-5)
ERS	3
WRS	4
DC, 1B	3
Risk-Managed Hybrid	3.5

Notes:
Actuarial projections done by The Terry Group based on Milwaukee County ERS plan assumptions. Updated using additional data from Segal.

Criteria 7: Flexibility to change design in the future

Plan	Future Flexibility
WRS	No future flexibility. Joining WRS is non-revocable.
DC, 1B	Significant future flexibility. County could modify DC plan, revert to DB, adjust benefits rates, and more.
Risk-Managed Hybrid	Significant future flexibility. County could modify hybrid plan, revert to full DB, adjust benefits rates, and more.

Plan	Score (1-5)
ERS	3
WRS	1
DC, 1B	3
Risk-Managed Hybrid	3

Criteria 8: Ease of administration

Plan	Ease of administration
WRS	State administers the plan for new hires. ERS continues to administer closed plan for 70+ years.
DC, 1B	ERS continues to administer closed DB plan for 70+ years.
Risk-Managed Hybrid	ERS continues to administer plan and adds an additional tier to the DB plan.

Plan	Score (1-5)
ERS	3
WRS	5
DC, 1B	4
Risk-Managed Hybrid	2

Criteria 9: Impact on inter-generational equity

Plan	New Hire Payments toward Active Unfunded Liability, 2017-2046
Baseline	$128m
WRS	$0m
DC, 1B	$0m
Risk-Managed Hybrid	$64m

Plan	Score (1-5)
ERS	3
WRS	5
DC, 1B	5
Risk-Managed Hybrid	3

Notes:
Actuarial projections done by The Terry Group based on Milwaukee County ERS plan assumptions. Updated using additional data from Segal. Uses ERS assumed rate of return to determine implied cost of debt payments.

Summary of Ratings

Criteria	ERS	WRS	DC, 1B	Risk-Managed Hybrid
1: Employer costs	3	3	3.5	3.5
2: Employee costs	3	2.75	2.75	3.25
3: Unfunded liability	3	3	3	3
4: Existing employee Retention	3	4	2.5	3.5
5: New employee recruitment	3	4	2.5	3.5
6: Risk	3	4	3	3.5
7: Future design flexibility	3	1	3	3
8: Ease of administration	3	5	4	2
9: Inter-generational equity	3	5	5	3
Average	3	3.53	3.25	3.14

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Evaluation: Approaches to Addressing the Existing Funding Gap

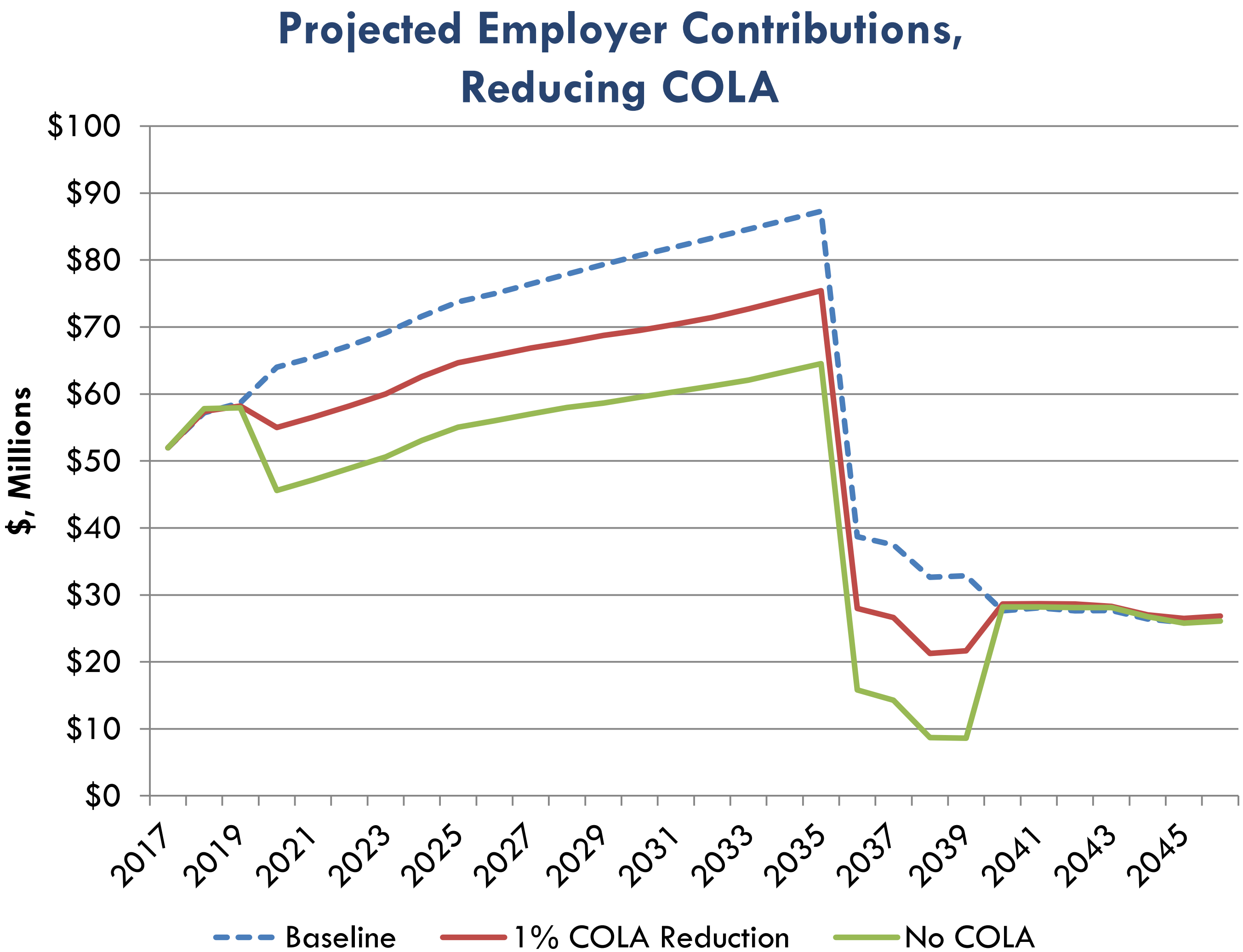
Pension Debt Options

Reducing Benefit Multiplier

- Prior reform efforts have largely closed off some benefit provisions that have driven employer costs going forward; retroactive changes would face legal obstacles.
- Our understanding is that at this point all future service for current general employees earns a 1.6% multiplier. Achieving savings through further reductions in the multiplier would require going below that level for future service.
- Other relevant benefit provisions include retirement age, vesting, and the final average salary calculation.
- The Backdrop benefit looks to have been largely closed off to the extent possible.

Criteria	Reduce Multiplier
1: Employer Cost	4
2: Employee Cost	4
3: Pension Debt	3
4: Employee Retention	2
5: Employee Recruitment	2
6: Risk	3
7: Future Change	N/A
8: Admin	2
9: Equity	3

Pension Debt Options

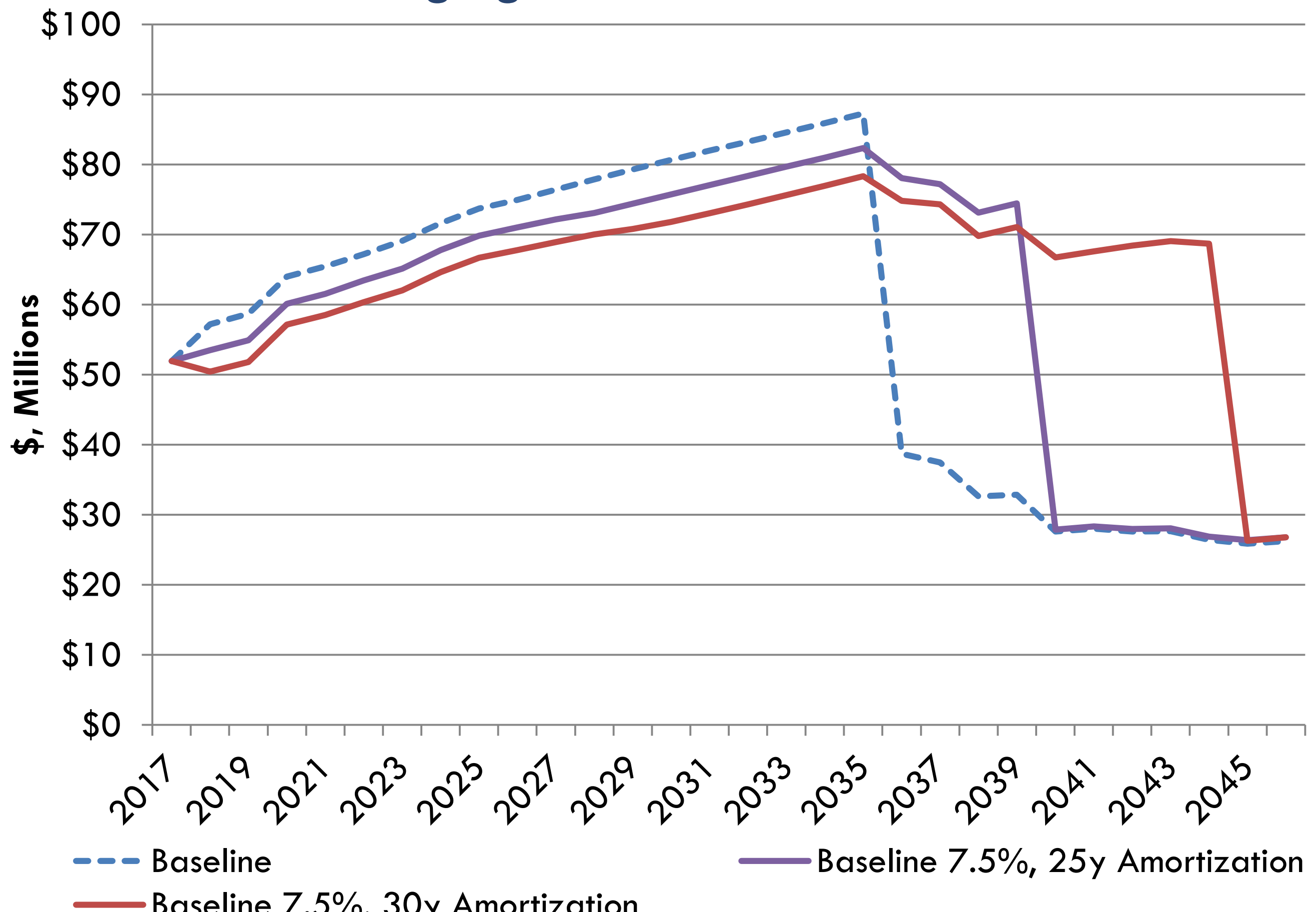


	Reduce COLA
1: Employer	5
2: Employee	5
3: Pension Debt	5
4: Employee Retention	2
5: Employee Recruitment	2
6: Risk	4
7: Future Change	N/A
8: Admin	2
9: Equity	3

Notes:
Actuarial projections done by The Terry Group based on Milwaukee County ERS plan assumptions. Updated using additional data from Segal.

Pension Debt Options

Projected Employer Contributions, Changing Amortization Periods

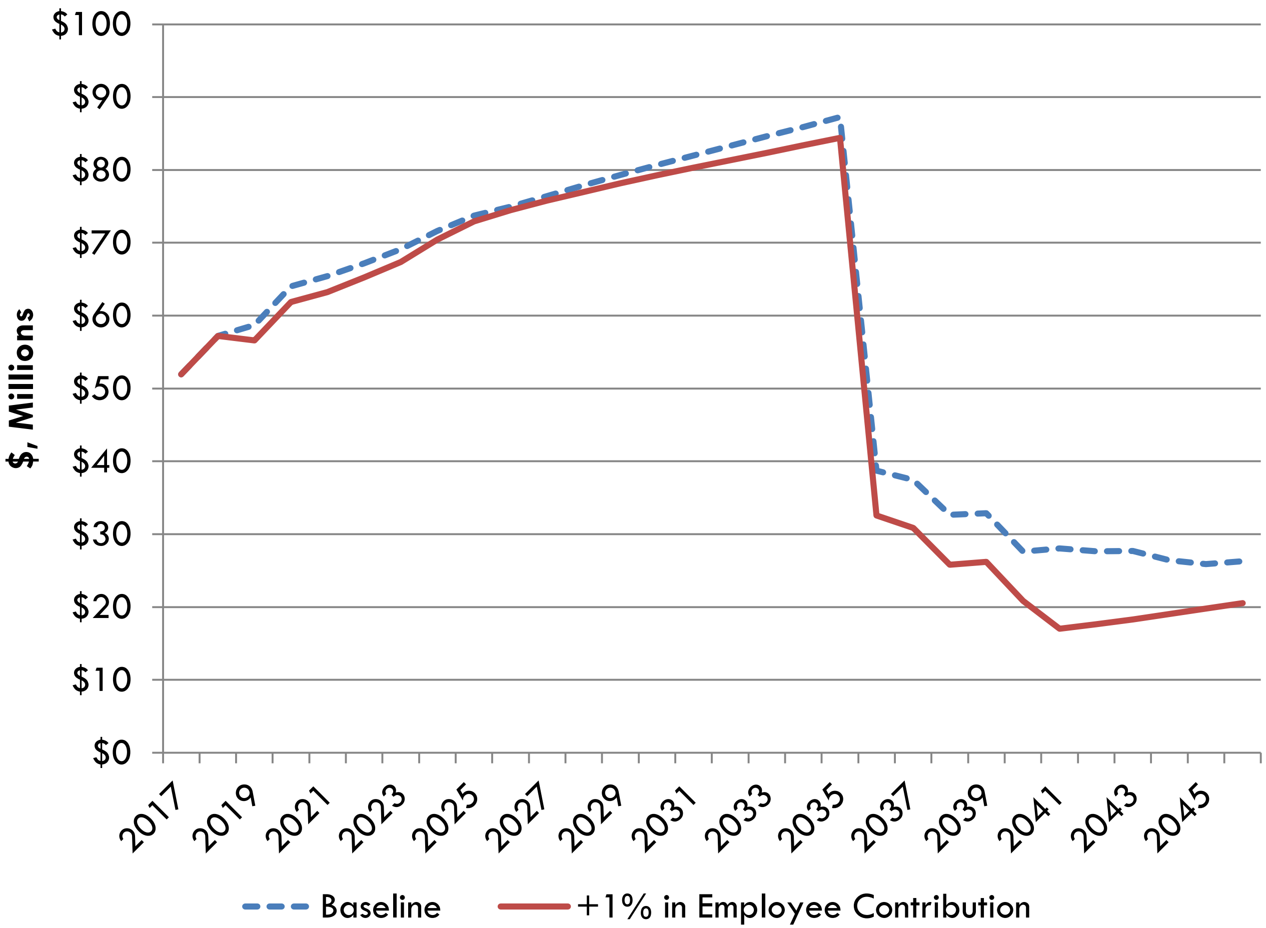


	Extend Amortization Period
1: Employer	4
2: Employee	4
3: Pension Debt	2
4: Employee Retention	3
5: Employee Recruitment	3
6: Risk	2
7: Future Change	N/A
8: Admin	3
9: Equity	2

Notes:
Actuarial projections done by The Terry Group based on Milwaukee County ERS plan assumptions. Updated using additional data from Segal.

Pension Debt Options

Projected Employer Contributions, Increasing Employee Contribution

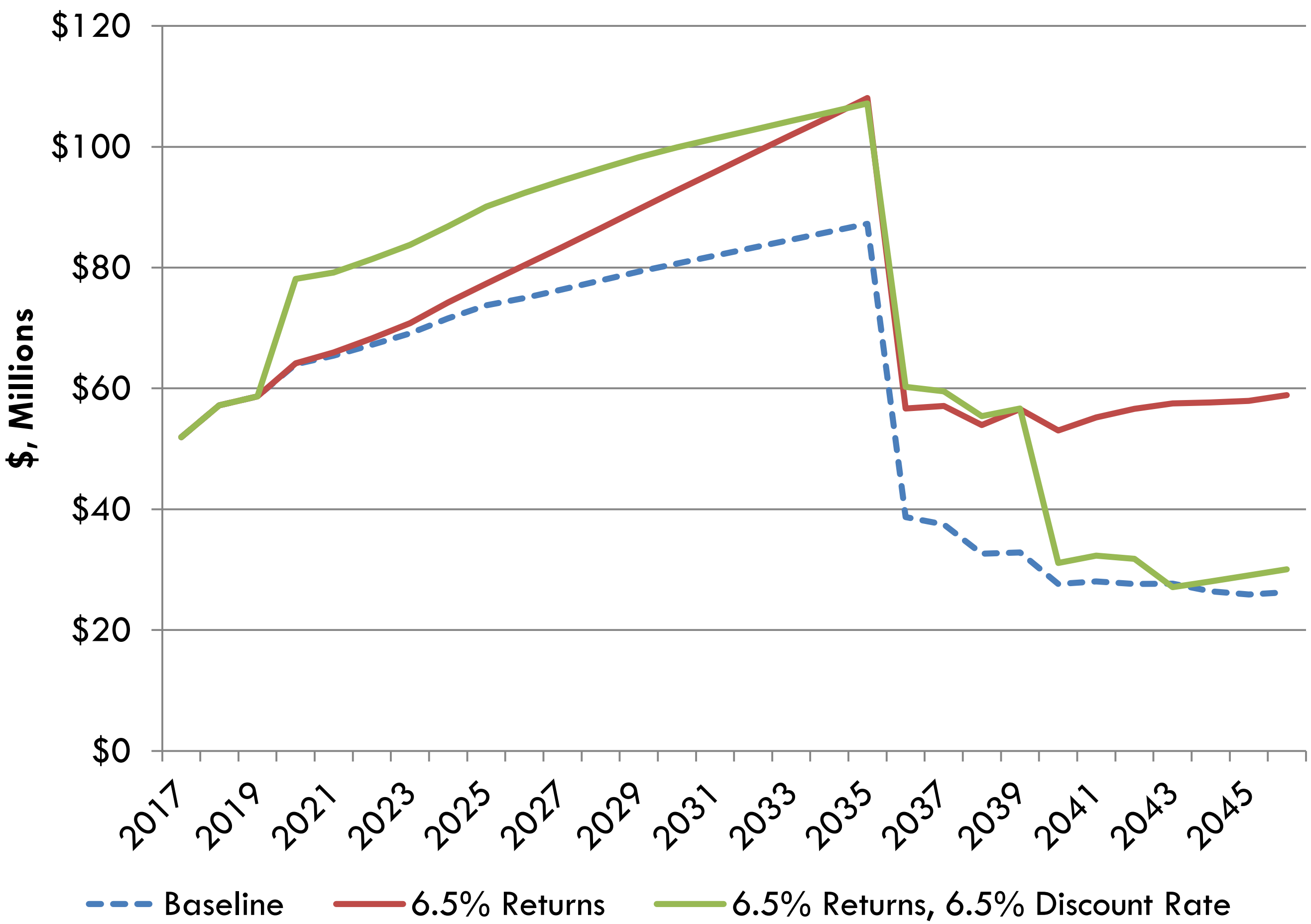


	Increase Employee Contribution Rate
1: Employer	4
2: Employee	1
3: Pension Debt	3
4: Employee Retention	2
5: Employee Recruitment	2
6: Risk	3
7: Future Change	N/A
8: Admin	3
9: Equity	3

Notes:
Actuarial projections done by The Terry Group based on Milwaukee County ERS plan assumptions. Updated using additional data from Segal.

Pension Debt Options

Projected Employer Contributions, Changing Returns and Discount Rates



	Lower Discount Rate
1: Employer	2
2: Employee	2
3: Pension Debt	4
4: Employee Retention	3
5: Employee Recruitment	3
6: Risk	4
7: Future Change	N/A
8: Admin	3
9: Equity	4

Notes:
Actuarial projections done by The Terry Group based on Milwaukee County ERS plan assumptions. Updated using additional data from Segal.

Summary of Pension Debt Ratings

Criteria	Reduce COLA	Extend Amortization Period	Reduce Multiplier	Increase Employee Contribution Rate	Lower Discount Rate
1: Employer costs	5	4	4	4	2
2: Employee costs	5	4	4	1	2
3: Unfunded liability	5	2	3	3	4
4: Existing employee Retention	2	3	2	2	3
5: New employee recruitment	2	3	2	2	3
6: Risk	4	2	3	3	4
7: Future design flexibility	N/A	N/A	N/A	N/A	N/A
8: Ease of administration	2	3	2	3	3
9: Inter-generational equity	3	2	3	3	4
Average	3.5	2.88	2.88	2.63	3.13

Considerations for Taskforce Deliberations

Key Questions for Taskforce

- Who should bear the costs of dealing with the existing unfunded liability:
  - How to balance between taxpayer, employee, and retiree?
  - How to balance across generations?

- How much risk should Milwaukee County take on?
  - Should the discount rate be lowered further—to 7% or 6.5%?
  - Should the existing plan design be adapted to share more risk?

- What is the appropriate plan design for new hires and what is the right package of changes to manage the existing unfunded liability?

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Conclusion

Conclusion

- Scoring each policy option reflects both objective and subjective analysis.
- Ultimate question is what set of options will work for Milwaukee County.
- Each plan design option offers potential improvement over the existing policies in place. Wisconsin Retirement System, in particular, offers a proven model.
- There are levers available to reduce the cost and risk of the existing promises but in each case there are tradeoffs.
- Based on the feedback offered by taskforce members and participants, we will identify specific packages of changes to be modeled for next month's meeting.

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